

UNITED STATES PATENT OFFICE.

JOSEPH W. SKINNER, OF LA CROSSE, WISCONSIN.

COMPOSITION OF MATTER FOR PLATING METALLIC SURFACES WITH SILVER.

SPECIFICATION forming part of Letters Patent No. 511,810, dated January 2, 1894.

Application filed April 6, 1893. Serial No. 469,327. (No specimens.)

To all whom it may concern:

Be it known that I, JOSEPH W. SKINNER, a citizen of the United States, residing at La Crosse, in the county of La Crosse and State of Wisconsin, have invented a new and useful Composition of Matter to be Used for Coating or Plating Metallic Surfaces with Silver, of which the following is a specification.

My composition consists of the following ingredients combined in the following proportions, to-wit: crystals of nitrate of silver, four parts; cyanide of potassium, eight parts; hyposulphite of sodium, two parts; zinc, one part; French whiting, twenty-four parts; pure water, forty-eight parts.

The above ingredients are all compounded by weight and when so compounded are allowed to stand until a chemical combination thereof is effected, when the composition is ready for use. Such combination of the ingredients will be facilitated by a gentle agitation of the mixture. In order to further facilitate such combination the zinc is preferably in the form of fine particles, as filings or the like, but this is not essential.

In using this composition, the surface of the metal to be coated or plated is first cleansed by means of any suitable cleansing solution or medium, in a familiar manner and thoroughly dried. The silver solution, after being first well shaken, is then applied thereto. Immediately upon the application of such solution to said surface a chemical reaction

takes place, whereby free metallic silver is liberated, which is deposited upon and adheres to the surface of the metal to which applied, forming a thin coating over the same.

The operation of this solution or composition is most satisfactory when used upon brass or copper or other metals which react readily upon the silver solution in the manner described and which do not corrode readily, but any metal which will cause a chemical reaction whereby metallic silver is liberated may be plated in a similar manner.

I am aware that silver plating solutions or compositions have heretofore been very extensively used. I am not aware, however, that all of the ingredients of my composition, in the proportions specified have been used together.

I claim—

The herein described composition of matter to be used in coating or plating the surface of metallic articles, consisting of crystals of nitrate of silver, cyanide of potassium, hyposulphite of sodium, zinc, French whiting and pure water in the proportions specified.

In testimony that I claim the foregoing as my invention I hereunto set my hand this 23d day of February, 1893.

J. W. SKINNER.

Witnesses:

J. E. McCONNELL,
CHAS. H. SCHWEIZER.